

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003946**Date Inspected:** 21-Aug-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Zhen Chang Song**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Assembly**Summary of Items Observed:**

OBG Assembly Bay II

This report serves to document the events occurring on this date at the following location. Caltrans Quality Assurance (QA) Inspector Robert Vatcher arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following: The weather today is 27C, clear with winds south east & increased at 2-3 kph.

Orthotropic Box Girder (OBG) Fabrication

QA arrived at OBG Bay 1 at 0800 hrs. for the purpose of witnessing deck panel joining of DP42-001 to DP80-001 for SEGMENT 020*-002 production in accordance with WPS B T 2231-B-U2-F-1 (FCAW) & WPS-B-T-2221-L2C-S-2 (SAW). QA performed wps verification for the above mentioned weld joint to WPS-B-T-2221-L2C-S-2 (SAW) in the flat position for welding operator Wang Min id number 048296. Measured parameters were as follows; Preheat verified at 20 degrees Celsius, voltage-31.7, Amperage-620.0 utilizing electrode positive with 4.8 mm diameter H-14 wire electrode and a travel speed 580 millimeters per minute. ZPMC QC inspector (CWI) onsite is C.M. Chen and the AB/F QC inspector is Zhen Chang Song. QA observed QC verify all the above parameters as well utilizing appropriate amp gauges and digital temperature guns as well.

QA also performed witnessing of deck panel production in accordance with WPS B T 2231-B-U2-F-1 (FCAW) & WPS-B-T-2221-L2C-S-2 (SAW) deck panels DP53A to DP54A for Segment 0143*-0043. QA performed WPS

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

verification for the above mentioned weld joint to WPS B T 2231-B-U2-F-1 (FCAW) in the flat position for welding operator Wang Min id number 048296. Measured parameters were as follows; Preheat verified at above 20 degrees Celsius, voltage 28.7 Amperage-285.0 utilizing electrode positive with 1.4 mm diameter E71-T1 wire electrode. travel speed 485 millimeters per minute. As well fit-up prior to joining was examined and found to intimate at the root location ZPMC QC inspector (CWI) onsite is C.M. Chen and the AB/F QC inspector is Zhen Chang Song. QA observed QC verify all the above parameters as well utilizing appropriate amp gauges and digital temperature guns as well.

QA performed a pre-examination of the deck plates set into place on top of 4AW segment. QA observed that what appeared to be a 4 ton counterweight was place on top of the two joined deck panels to increase and provide for an intimate contact between the deck panels and the cross beam member.

Summary of Conversations:

QA spoke with AB/F QC representative Mr. Peter Shaw concerning the joining of side plates to cross beam members in the OBG Assembly Shop. QA inquired of UT that was being performed post welding and what the status of said NDT of these joints was. Mr. Shaw explained that he had a handwritten or type written spreadsheet of what had been accomplished and what was previously rejected. Mr. Shaw further explained that he thought that the reject rate was high for the number and length of these joints and that the interpass cleaning habit of the welders in the 4G position (overhead) was "bad." Mr. Shaw continued with the fact that the "best" welders needed to be put on these joints when welded and that interpass cleaning using wire brushes and slag hammers should be utilized throughout the welding process.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Ady Velasco 138-1694-2685, who represents the Office of Structural Materials for your project.

Inspected By:	Vatcher,Robert	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer
